

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently amended) A communications system for communicating between points of presence and customer premises comprising:
a plurality of ATM nodes,
first connection means for connecting said ATM nodes to said customer premises,
second connection means for connecting said ATM nodes to said points of presence,
a plurality of transports connecting said ATM nodes in an ATM network having a mesh architecture, and
control means for controlling the routing of data among said ATM nodes to enable the transport of information between said points of presence and said customer premises, and
wherein said ATM network provides an alternate backhaul transport for communications between said points of presence and said customer premises in parallel with an established backhaul transport via an office, and said ATM nodes are located away from said office to be close to respective ones of said customer premises.
2. (Original) The communications system of Claim 1 wherein said ATM nodes are environmentally-hardened.
3. (Original) The communications system of Claim 2 wherein said ATM nodes are all weather hardened for outdoor installation.
4. (Original) The communications system of Claim 3 wherein said ATM nodes are located in utility-pole-mountable enclosures.

5. (Original) The communications system of Claim 1 wherein said transports are wireless.

6. (Original) The communications system of Claim 1 wherein said first connection means are wireless.

7. (Original) The communications system of Claim 1 wherein said ATM nodes are multiplexers.

8. (Original) The communications system of Claim 1 wherein said ATM nodes are switches.

9. (Original) The communications system of Claim 1 wherein said control means operates to determine the quality of communications over said transports and establishes routing based upon said quality.

10. (Original) The communications system of Claim I wherein said ATM nodes are supervised by an element manager.

11. (Original) The communications system of Claim 1 wherein said ATM network connects to an ILEC central office.

12. (Original) The communications system of Claim I wherein said ATM network connects to a CLEC office.

13. (Original) The communications system of Claim 1 wherein said ATM network connects to other networks.

14. (Original) The communications system of Claim 13 wherein said other networks include the Internet.

15. (Currently amended) The communications system of Claim ~~10~~operating 1 operating for servicing said customer premises where said customer premises are connected to access points and use ~~an~~ said established backhaul transport to ~~an~~ communicate with said office wherein,

said first connection means includes,

one or more remote digital subscriber line access multiplexers,

access connecting means for connecting said access multiplexers to said access points,

and wherein,

said ATM network forms ~~an~~ said alternate backhaul transport for connecting said access multiplexers with said points of presence to provide broadband services to said customer premises.

16. (Currently amended) The communications system of Claim 15 wherein said access multiplexers are environmentally-hardened in ~~are~~ all-weather, pole-mountable enclosures.

17. (Original) The communications system of Claim 15 wherein said office is an ILEC 2 central office and said alternate backhaul transport connects to said ILEC central office, to a CLEC office and to other networks.

18. (Currently amended) In a communications system for communications between points of presence and customer premises, a method comprising:

enabling a plurality of transports to connect a plurality of ATM nodes in an ATM network,

connecting said communications between said ATM nodes and said customer premises,

connecting said communications between said ATM nodes and said points of presence,

controlling the routing of communications among said ATM nodes to enable the transport of said communications between said points of presence and said customer premises, and

wherein said ATM network provides an alternate backhaul transport for communications between said points of presence and said customer premises in parallel with an established backhaul transport via an office, and said ATM nodes are located away from said office to be close to respective ones of said customer premises.

19. (Original) The method of Claim 18 wherein said ATM nodes are environmentally hardened.

20. (Original) The method of Claim 19 wherein said ATM nodes are all-weather hardened for outdoor installation.

21. (Original) The method of Claim 18 wherein said ATM nodes are located in pole mountable enclosures.

22. (Original) The method of Claim 18 wherein said transports are wireless.

23. (Original) The method of Claim 18 wherein the connection of said communications between said ATM nodes and said customer premises uses wireless transports.

24. (Original) The method of Claim 18 wherein said ATM nodes are multiplexers..

25. (Original) The method of Claim 18 wherein said ATM nodes are switches.

26. (Original) The method of Claim 18 wherein said control means operates to determine the quality of communications over said transports and establishes ATM network routing based upon said quality.

27. (Original) The method of Claim 26 wherein said quality of communications is based on bit error rate measurements.

28. (Original) The method of Claim 26 wherein said quality of communications is based on received signal strength indications.

29. (Original) The method of Claim 26 wherein said control means periodically updates a radio management information data base with said quality of communications.

30. (Original) The method of Claim 29 wherein said data base stores an ATM Resource Availability Information Group.

31. (Original) The method of Claim 30 wherein said ATM Resource Availability 2 Information Group includes one or more of peak cell rate, available cell rate and cell loss ratio parameters.

32. (Original) The method of Claim 29 wherein said control means periodically examines said data base and responsively adjusts the ATM network routing topology.

33. (Original) The method of Claim 18 wherein said ATM nodes are supervised by an element manager.

34. (Currently amended) A communications system for servicing customer premises connected to access points and connected over an established backhaul transport to an office comprising:

an access network formed of one or more environmentally-hardened remote digital subscriber line access multiplexers in pole-mountable enclosures placed at locations away from said office to be close to respective ones of said customer

premises and a plurality of access wireless transports connecting said access multiplexers,
access connecting means for connecting said access multiplexers to said access points,
a mesh network forming a an alternate backhaul transport in parallel with said established backhaul transport, said alternate backhaul transport ~~for~~ connecting said access multiplexers to provide broadband services to said ~~mesh network~~ customer premises and including a plurality of ATM nodes connected by a plurality of node wireless transports using a mesh architecture and having redundant connections,
and
a plurality of inter-network wireless transports connecting said access network to said mesh network.

35. (Original) The communications system of Claim 34 wherein said office is an ILEC 2 central office and said alternate backhaul transport connects to one or more of said ILEC central office, to a CLEC office and to other networks.

36. (Original) The communications system of Claim 34 wherein said access multiplexers are all-weather hardened for outdoor installation and interconnected by wireless transports.

37. (Original) The communications system of Claim 36 wherein said access multiplexers are located in pole-mountable, all-weather enclosures without need for ground-based power connections.

38. (Original) The communications system of Claim 34 wherein said access multiplexers include a processor unit, an ATM assembler and disassembler unit and an ATM switch fabric.

39. (Original) The communications system of Claim 34 wherein each of said access multiplexers includes a master unit and one or more trunk interface units

40. (Original) The communications system of Claim 39 wherein said master unit is in an 2 all-weather hardened enclosure and said trunk interface units are each in separate all-weather, pole-mountable trunk interface enclosures.

41. (Currently amended) A communications system for servicing customers connected to access points and using an established backhaul transport to an office comprising:
one or more all-weather, environmentally-hardened, remote digital subscriber line access multiplexers in pole-mountable enclosures placed at locations away from said office to be near said customers,

access connecting means for connecting said access multiplexers to said access points, an alternate backhaul transport in parallel with said established backhaul transport, said alternate backhaul transport ~~for~~ connecting said access multiplexers to provide broadband services to said customers wherein said alternate backhaul transport includes,

a plurality of ATM switches in pole-mountable enclosures connected by an plurality of switch wireless transports to form an ATM network having redundant connections,

control means to determine the quality of communications over said switch wireless transports and to establish routing in said ATM network based upon said quality,

a plurality of second wireless transports connecting said access multiplexers to form an access network having redundant connections,

a plurality of internetwork wireless transports connecting said access network to said mesh network.

42. (Currently added) The communications system of claim 1, wherein said ATM nodes are placed near edges of a telephone network connecting said customer premises.

43. (Currently added) The communications system of claim 1, wherein said ATM nodes are placed at said customer premises.